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ABSTRACT

A study conducted at Oberlin Elementary School, in Oberlin, Kansas, considered the effects of gender, family structure, parents' socioeconomic status (SES) and education, and grade level on students' tendency to stereotype occupations by sex. The study sample included 164 elementary school children, including 53 second graders, 62 fourth graders, and 49 sixth graders. In the sample, 73 children were girls and 91 boys. The students were asked to indicate for 30 occupations whether men only, women only, or both women and men could do the job. The study found that second graders had significantly higher sex-stereotyping scores than sixth graders. Girls with low SES parents had higher sex-stereotyping scores than girls with high SES parents, but boys with low SES parents had lower sex-stereotyping scores than boys with high SES parents. Neither family structure nor level of parent education was significantly related to sex stereotyping. A 19-item bibliography and the survey instrument are included. (AC)

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OCCUPATIONAL SEX-ROLE STEREOTYPING IN ELEMENTARY STUDENTS

being

A Thesis Presented to the Graduate Faculty
of the Fort Hays State University in
Partial Fulfillment of the Requirements for
the Degree of Master of Science

by

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Graduate Committee Approval

The Thesis Committee of Sheila K. Billings hereby approves her thesis as meeting partial fulfillment of the requirements for the Degree of Master of Science.

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Abstract

The purpose of the researcher was to investigate occupational sex-role stereotyping in elementary school children. The five independent variables were gender, family structure, socioeconomic status of parents, formal education of parents, and grade level. The dependent variable was Occupational Sex-Stereotyping scores. The sample consisted of 164 children from grades 2, 4, and 6. Six null hypotheses were tested at the .05 level using three-way analysis of variance.

A total of 21 comparisons plus 21 recurring were made. Of the 21 comparisons made, 5 were main effects and 16 were interactions. One of the 5 main effects was statistically significant at the .05 level. The statistically significant main effect was for grade level. The results from the main effect indicated that second graders had significantly higher sex-stereotyping scores than sixth graders. One of the 16 interactions was statistically significant at the .05 level. The statistically significant interaction was between gender and socioeconomic status of parents.

The results of the present study appeared to support the following generalizations:

(1) second graders have more sex-stereotyping than sixth graders,

(2) family structure is not associated with sex-role occupational stereotyping,

(3) level of parent education is not associated with sex-role occupational stereotyping,

(4) girls from low socioeconomic status parents had numerically greater sex-stereotyping than girls from high socioeconomic status parents, and

(5) boys from low socioeconomic status parents had numerically less sex-stereotyping than those from high socioeconomic status parents.

Introduction

Overview

"A sex stereotype is usually considered to be cognitive, it is a set of beliefs, it deals with what men and women are like, and it is shared by the members of a particular group." (Williams and Best, 1982, p. 15). Stereotypes often do not allow for individual differences and have limited or no information to support them.

As early as 1922, in the context of social and political ideas, the term stereotype was used. Lippman, an American journalist, referred to the "pictures in our heads" of various social groups (Bar-Tal, Graumann, Kruglanski, and Stroebe, 1989). Through the ages women have played an important role contributing substantially, both in labor and care, to the family, yet males have always been viewed as dominant (Forisha, 1978). The belief system of male dominance has been investigated over the years to present day. The generalization that males are dominant has been researched in the work place pertaining to occupational sex-stereotyping. Williams and Best (1982) reported that there are many occupations, in every country, that are highly sex-typed.

> At the professional level in the United States, elementary school teachers and nurses are usually women and engineers and accountants are usually men; at a less skilled level, domestic workers are usually women

> and truck drivers are usually men; in the business area, most clerical workers are women and most managers are men. (p. 293)

According to O'Reilly (1988, p. 4), "Women are still clustered in low-paying, low status, traditional jobs, such as waitress, clerk, and secretary."

Blankenship (1984) maintained the following:

> The strength that stereotypes have in affecting people's behavior lies in the fact that they are learned at a very early age. Research and theory suggest that very young children naturally see people in terms of stereotypes because it is cognitively a way of structuring the world so that it can be understood.... Unfortunately, learned so early, most stereotypes are not questioned but simple accepted as truth. (pp. 3-4)

"Where do sex-role stereotypes come from? They begin at birth but might begin earlier if parents know the sex of their baby before birth" (O'Reilly, 1988, p. 2). Direct and subtle stereotypic messages are often transmitted by the parents the minute the sex of the newborn is known.

Pomerleau, Bolduc, Malcuit, and Cossette (1990) researched environmental gender stereotypes in the first two years of life. It was found that play environments of girls and boys differ according to gender. Boys were noted as having a larger variety of toys. Boys had more sports

equipment, vehicles, and military toys, whereas girls had more feminine toys such as dolls, doll houses, and domestic objects. Colors of the environment were also reported. Boys wore more blue, red, and white clothing while girls wore pink and multicolored clothing. Gender differences were also seen in colors of the bedrooms. Williams and Best (1982) reported that stereotyping can occur as early as age 3. Prior to age 7 or 8 children focused on "overt" qualities, such as appearance and possessions, but older children focused on "covert" qualities, such as dispositions, values, and beliefs.

Sex-Stereotyping in School

O'Reilly (1988) maintained that teachers have a powerful impact on children and youth. Many teachers bring sex-role stereotyping to the first class they teach. They have experienced females who teach at the elementary level and males who are principals and superintendents. Do teachers believe that one sex is better than the other? O'Reilly (1988) concluded that teachers' "perceptions of better" are divided: girls behave better but boys have better brains and bodies; therefore, are more valuable to society. An example of stereotypes firmly established in the school system was given by O'Reilly (1988) when she stated,

> It is frustrating to hear an announcement over the intercom that fifth grade and sixth grade boys are

> needed to carry boxes to the book room when, in fact, at this age girls are larger than boys and have more shoulder skeletal muscle and therefore are better equipped to carry anything! (p. 4)

Williams and Best (1982) concluded that teachers play an important role in the sex-role development of children beginning as early as preschool. Girls receive more positive feedback for nonacademic behaviors, such as neatness and quietness. Boys receive more positive feedback for academic behaviors. O'Reilly (1988) reported that "...teachers ask boys questions that lead them to find their own answers and ask girls questions that can be answered yes or no" (p. 3). Teachers may encourage stereotypically appropriate behaviors, such as competition in boys and provide more physical closeness for girls (Williams and Best, 1982).

Blankenship (1984) reported several differences in the way teachers interact with boys and girls.

> Teachers were found to talk more to boys than to girls and to interact more with boys in general than with girls. They help boys solve problems but give girls the answers.... Teachers also expect boys to give them more trouble...and discipline boys more harshly.... Intellectually, the bias is for males; socially and behaviorally, for females. (p. 8)

Williams and Best (1982) concluded that teachers appear to

be unaware of their stereotypical behaviors toward children.

Sex-stereotyping in the school is also evident in children's books and elementary level text books. The research of Bertrand, Dawson, Heath, Simmons, and Thompson (1976) explained that "many children's books show people in roles that stereotype them according to their sex, race, ethnic group, or family situation" (page not numbered). Weitz (1977) stated, "After sitting through years and years of lessons that rarely mention women (or only mention them in stereotyped contexts), it is no wonder that many students take with them from school a sex-stereotyped view of life" (p. 85). Morgan (1989) indicated that sex stereotyping in children's literature influence children's attitudes concerning sex roles. O'Reilly (1988) reported that in the 1970's textbook publishers made a commitment to use nonsexist language. Morgan (1989) maintained that many publishers employ guidelines for eliminating sex-role stereotypes; however, studies show that stereotypes still thrive in children's literature. Staley and Mangieri (1984) stated that "children should be given the opportunity to read both informational books that offer facts about many kinds of occupations and fiction that portrays positive role models" (p. 201). Not only is it important to broaden children's awareness of job possibilities, an effort should be made to select books that portray men and women as having equal opportunities (Staley and Mangieri, 1984).

Gender and Sex-Occupational Stereotyping

Forisha (1978) stated the following:

> Within the framework of sex-role stereotypes man is regarded as the achiever - regardless of whether any particular man at any particular moment might rather not achieve. Within this same framework woman is regarded as the nurturer - regardless of whether at any given moment she might choose not to nurture. (p. 147)

Kuhn, Nash, and Brucken (1978) conducted a study of 2 and 3 year old children and found that they had certain beliefs about future roles. It was reported that both boys and girls believe that when they grow up boys will be the boss and mow the grass. It was also reported that both believe that when they grow up girls will clean the house, be a nurse and be a teacher. Awender and Wearne (1990) found that "boys in grades one and two perceived twice as many occupational opportunities open to them as did their female classmates" (p. 3).

Looft (cited in George and Schaer, 1988) asked a group of second graders, "What do you want to be when you grow up" (p. 1)? George and Schaer (1988) reported that the girls chose only teacher, nurse, housewife and mother. The boys, however, chose 18 possible future careers with football player and policeman occurring the most. George and Schaer (1988) asked second graders the same question and their results showed that "second grade students, especially

males, are still selecting sex stereotyped future careers" (p. 5). It was also noted that girls were selecting a wider variety of jobs.

Hageman and Gladding (1983) studied a sample of sixth graders and reported that girls accepted men and women in traditionally male occupations. Boys reported that only males should be employed in traditionally male occupations such as auto mechanic, architect, doctor, principal, astronaut, professional athlete, lawyer, truck driver, and police officer. Harris (1974) reported that elementary school aged girls saw themselves in sex-typed occupations such as teacher, nurse, and housewife.

Grade Level, Age, and Sex-Occupational Stereotyping

Awender and Wearne (1990) examined occupational perspectives and preferences of students ages 9-14. They reported that as the age of children increased the sex-occupational stereotypes decreased. Fadale (1974) affirmed that older elementary children display more career awareness in relationship to workers, job function, and occupational prestige.

A longitudinal study by George and Schaer (1988) looked at occupational preference of elementary female students over a 5 year period. Their study revealed that career choices of girls between the ages of 8 and 13 were affected by IQ, family background, and parental views on sex-stereotyping. Those females who chose mathematics and

science careers had higher IQ's and grade point averages than females who chose nursing and teaching as careers. Parents of females choosing non-traditional jobs had more formal education. Females who chose non-traditional careers referred to themselves as "tomboys" during their childhood. As the age of girls increased the assortment of career choices also increased. Hageman and Gladding (1983) compared occupational preferences of elementary male students. As the age of the males increased so did their traditional and conservative career choices. According to Eichman (1987), in children ages 6, 8, and 10 years, age has little or no effect on their views of occupational sex-stereotyping.

> Data also showed that children, ages four and five, have the same kinds of stereotypes about careers that the American society has.... The number of years children had spent in school did not decrease the degree of stereotyping. No significant difference was found from the first grade to the third grade to the fifth grade. (p. 10)

Socioeconomic Status and Sex-Occupational Stereotyping

Fadale (1974) found that children from the upper socioeconomic status reported more career awareness than those from the lower socioeconomic status. Children from the upper socioeconomic status revealed a broader knowledge of identification of workers, occupational prestige, and job

advantages (Fadale, 1974).

Awender and Wearne (1990) conducted a study to determine if there was a relationship between socioeconomic status and occupation choice of children. "Sex stereotypic answers were given by the lowest socio-economic group most often, followed by the highest socio-economic group. The middle socioeconomic group of respondents demonstrated virtually no pattern of selecting traditional male and/or female occupations" (p. 8).

Family Structure and Sex-Occupational Stereotyping

The researcher did not find any related literature pertaining to family structure and sex-occupational stereotyping.

Formal Education of Parents and Sex-Occupational Stereotyping

The researcher did not find any related literature pertaining to family structure and sex-occupational stereotyping.

Summary

Wearne (1991) stated the following:

> A review of the professional literature covering the last quarter of a century...showed most research indicates that the stereotyping of career roles still occurs among children and youth and this form of stereotyping has a significant influence on career choice and vocational aspirations. (p. 7)

Forisha (1978) maintained that not everyone will agree on the topic of sex roles. Why then do researchers study sex roles? Forisha (1978) reported that by doing so "...we can learn more about ourselves.... With our knowledge we can exercise some control over our lives; hence we can direct our future" (p. 5).

Statement of the Problem

The purpose of the researcher was to investigate occupational sex-role stereotyping in elementary school children.

Importance of the Research

The study was exploratory. It contained more variables and in different combinations than was found in the related research.

The results of the present study could be used by elementary school counselors and teachers to develop career awareness units. This study could help teachers and counselors become aware of the importance of using the Occupational Sex-Stereotyping to determine the amount of stereotyping that exists in elementary students. After developing an awareness, the results could be used to build or enrich a curriculum including non-traditional career awareness. A study of this nature will also extend knowledge in the areas of school curriculum, child development, and future theories on sex-role stereotyping.

The outcome of this study will contribute to knowledge

as a result of employing more variables and different combinations than found in the research. The results of the present study provided information pertaining to the following questions:

1. Is there an association between gender and sex-role occupational stereotyping in elementary school children?
2. Is there an association between family structure and sex-role views of second, fourth, and sixth grade students?
3. Is there an association between socioeconomic status of parents and the sex-role occupational stereotyping of their elementary school children?
4. Is there an association between the level of parent education and sex-role occupational stereotyping of their elementary school children?
5. Is there an association between grade level and sex-role occupational stereotyping in second, fourth, and sixth grade students?

Composite Null Hypotheses

All Hypotheses were tested at the .05 level of significance.

1. The differences among the mean sex-role occupational stereotyping scores of elementary school children according to gender, formal education of parents, and socioeconomic status of parents will not be

statistically significant.

2. The differences among the mean sex-role occupational stereotyping scores of elementary school children according to gender, family structure, and socioeconomic status of parents will not be statistically significant.

3. The differences among the mean sex-role occupational stereotyping scores of elementary school children according to gender, family structure, and formal education of parents will not be statistically significant.

4. The differences among the mean sex-role occupational stereotyping scores of elementary school children according to family structure, socioeconomic status of parents, and formal education of parents will not be statistically significant.

5. The differences among the mean sex-role occupational stereotyping scores of elementary school children according to gender, family structure, and grade level will not be statistically significant.

6. The differences among the mean sex-role occupational stereotyping scores of elementary school children according to socioeconomic status of parents, formal education of parents, and grade level will not be statistically significant.

Definition of Variables

Independent Variables

Information pertaining to the independent variables came from the demographic section of the questionnaire and school records. Five independent variables were investigated. They were the following:

gender - two levels;

level one - girls, and

level two - boys;

family structure - four levels determined post hoc;

level one - intact,

level two - mother and stepfather,

level three - mother, and

level four - other;

socioeconomic status of parents - two levels;

level one - those not paying full price for school lunch, and

level two - those paying full price for school lunch;

formal education of parents - four levels determined post hoc;

level one - high school graduation or less,

level two - education beyond high school, less than four years,

level three - some college but no degree, and

level four - college degree or more;

grade placement - three levels;

level one - second grade,

level two - fourth grade, and

level three - sixth grade.

Dependent Variable

The dependent variable was scores from Occupational Sex-Stereotyping.

Limitations

The results of the study might have been affected by the following:

(1) sample was not random;

(2) subjects for the study were from one unified school district;

(3) the dependent variable was the results from a self reporting inventory;

(4) only grades 2, 4, and 6 were included in the study; and

(5) subjects were from one geographical location.

Methodology

Setting

The study was conducted at Oberlin Elementary School located in Decatur County, Kansas, in the city of Oberlin. The population of Oberlin is between 2000-2500. The major source of income for Oberlin is farm-related employment. As of May 15, 1992, enrollment at Oberlin Elementary was 390 students K-6. The professional staff at Oberlin Elementary School includes 22 certified classroom teachers.

Subjects

The sample consisted of 164 elementary school children who were attending a school in a rural setting of northwest Kansas. The sample included 53 second graders, 62 fourth graders, and 49 sixth graders. The sample consisted of 73 girls and 91 boys.

The sample was not random. The researcher was given permission to survey all students in grades 2, 4, and 6. Of the 173 students enrolled in the three classes, 164 were present when the questionnaire was administered.

Instrumentation

One instrument was employed in the present study. The instrument was the Occupational Sex-Stereotyping.

The Occupational Sex-Stereotyping consists of 30 items. Items for the inventory were adapted by Eichman from three studies; (Bailey and Nihlen, 1983; Scheresky, 1977; and Kennedy, 1979; cited by Eichman, 1987). The instrument consisted of a list of 30 occupations. The respondent had three options, "male only," "female only," or "both". The subjects were asked to circle the response that best described who they thought could do that job (Appendix A).

Design

A status survey factorial design was employed. The independent variables investigated were gender, family structure, socioeconomic status of parents, formal education of parents, and grade level of the student. The dependent

variable was scores from the Occupational Sex-Stereotyping. Six composite null hypotheses were tested employing three-way analysis of variance. The following design was used with each composite null hypothesis:

composite null hypothesis number one, a 2x4x2 factorial design;

composite null hypothesis number two, a 2x4x2 factorial design;

composite null hypothesis number three, a 2x4x4 factorial design;

composite null hypothesis number four, a 4x2x4 factorial design;

composite null hypothesis number five, a 2x4x3 factorial design;

composite null hypothesis number six, a 2x4x3 factorial design.

McMillan and Schumacher (1989) cited 10 threats to internal validity. These 10 threats were dealt with in the following ways:

(1) history-did not pertain because the present study was status survey;

(2) selection-all students in grades 2, 4, and 6 who were present at the time the researcher collected the data were selected;

(3) statistical regression-did not pertain because there were no extreme subjects;

(4) testing-instruments were administered according to standard procedures;

(5) instrumentation-did not pertain because the present study was status survey;

(6) mortality-did not pertain because the present study was status survey;

(7) maturation-did not pertain because the present study was status survey;

(8) diffusion of treatment-did not pertain because the present study was status survey;

(9) experimental Bias-no treatment was administered and data were collected by standard procedures; and

(10) statistical conclusion-two mathematical assumptions were violated, random sample and equal numbers in cells. The lack of equal numbers in cells was corrected by using the general linear model and the researcher did not project beyond the statistical procedures employed.

McMillan and Schumacher (1989) cited 2 threats to external validity. These 2 threats were dealt with in the following ways:

(1) population external validity-a random sample was not used; therefore, generalizations should be made only to similar groups; and

(2) ecological external validity-no treatment was administered and data were collected by standard procedures.

Data Collecting Procedures

Data were collected from three grade levels. The researcher administered the Occupational Sex-Stereotyping. The students were asked to mark gender, grade level, and family structure on the demographic section of the inventory. The students were also asked to put their names on the inventory. The researcher explained that they would later be assigned a number and their name would be taken off to ensure confidentiality.

The researcher administered the instrument to each grade level. A marker was given to students to help them keep their place. The researcher read each item aloud as the students followed along. The students were instructed that if they had questions about an occupation they could ask the researcher. The children asked for descriptions of 13 occupations.

The researcher examined the demographic section as copies of the inventory were turned in. Being a small community the researcher was familiar with the family structure in which most students lived. A total of 8 copies of the inventory had information pertaining to family structure which was questioned by the researcher. Five copies of the inventory were noticed by the researcher while in the classroom. The student made any necessary changes. Three copies of the inventory were not noticed until later. In this case school records were checked and the information

was changed to fit the situation.

The researcher obtained the information for socioeconomic status and level of parent education from permanent record files in the school office. A data sheet was prepared for data analysis. The results were analyzed by mainframe computer in the Computing Center at Fort Hays State University, Hays, Kansas.

Research Procedures

The researcher implemented the following steps:

(1) research topic was selected;

(2) thesis adviser was contacted and permission given to conduct exploratory study;

(3) arrangements were made for obtaining data;

(4) arrangements were made with the school and grade levels to participate;

(5) computer searches were made using ERIC, Educational Index, Psychology Abstracts, and Sociofile;

(6) research proposal was compiled;

(7) research proposal was defended before a committee;

(8) data were prepared for computer analyses;

(9) final research report was written;

(10) final research report was defended before a committee; and

(11) final document was edited.

Data Analysis

The following were compiled:

(1) appropriate descriptive statistics,

(2) three-way analysis of variance (general linear model),

(3) Bonferroni (Dunn) t test for means, and

(4) Duncan's multiple range tests for means.

Results

The purpose of the researcher was to investigate occupational sex-role stereotyping in elementary school children. The independent variables were: gender, family structure, socioeconomic status of parents, formal education of parents, and grade level. The dependent variable was Occupational Sex-Stereotyping scores. The sample consisted of 164 elementary students. Six composite null hypotheses were tested at the .05 level. Each composite null hypothesis was tested employing three-way analysis of variance. The following design was used with each composite null hypothesis: number one a 2x4x2 factorial design; composite null hypothesis number two, a 2x4x2 factorial design; composite null hypothesis number three, a 2x4x4 factorial design; composite null hypothesis number four, a 4x2x4 factorial design; composite null hypothesis number five, a 2x4x3 factorial design; and composite null hypothesis number six, a 2x4x3 factorial design. The results section was organized according to composite null hypotheses for ease of reference. Information pertaining to

each null hypothesis was presented in a common format for ease of comparison.

It was hypothesized in composite null hypothesis number one that the differences among the mean sex-role occupational stereotyping scores of elementary school children according to gender, formal education of parents, and socioeconomic status of parents would not be statistically significant. Information pertaining to composite null hypothesis number one was presented in Table 1. The following were cited in Table 1: variables, sample sizes, means, standard deviations, F values, and p levels.

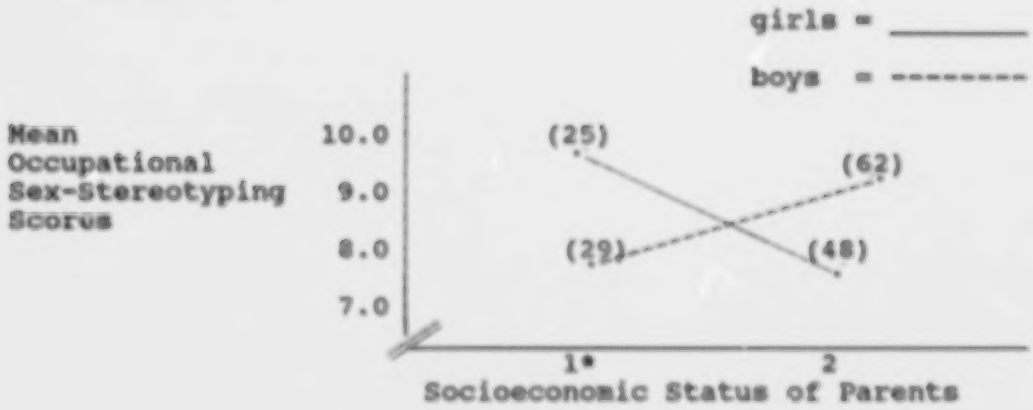
Table 1: A Comparison of Mean Occupational Sex-Stereotyping Scores of Elementary School Children According to Gender, Formal Education of Parents, and Socioeconomic Status of Parents Employing a Three-Way Analysis of Variance

Variable	n	M*	s	F value	p level
Gender (A)					
girls	73	8.3	6.22	1.37	.2433
boys	91	8.7	5.86		
Parent Education (B)					
1**	50	9.8	5.87		
2	38	7.9	6.02	2.37	.0731
3	29	8.4	4.88		
4	47	7.7	6.70		
Socioeconomic Status of Parents (C)					
1***	54	8.6	6.65	0.00	.9813
2	110	8.5	5.70		
Interactions					
A x B				1.33	.2667
A x C				5.24	.0235
B x C				1.68	.1728
A x B x C				0.45	.7160

*The larger the value the greater the stereotyping, the possible score was 0-30.
**1 = high school graduation or less, 2 = education beyond high school, less than four years, 3 = some college but no degree, and 4 = college degree or more.
***1 = those not paying full price for school lunch, 2 = those paying full price for school lunch.

One of the 7 p values was statistically significant at the .05 level; therefore, the null hypothesis for this comparison was rejected. The statistically significant comparison was for the interaction between gender and socioeconomic status of parents. The interaction was depicted in a profile plot. Figure 1 contains mean Occupational Sex-Stereotyping scores and curves for gender.

Figure 1 = Interaction Between Gender and Socioeconomic Status of Parents for the Dependent Variable Occupational Sex-Stereotyping.



*1 = those not paying full price lunch, 2 = those paying full price for lunch.

The interaction between gender and socioeconomic status of parents was disordinal. The results cited in figure 1 indicated the following: girls from low socioeconomic status parents had numerically higher occupational sex-stereotyping scores than girls from high socioeconomic status parents and boys from high socioeconomic status parents had numerically higher occupational sex-stereotyping scores than boys from low socioeconomic status parents.

It was hypothesized in composite null hypothesis number two that the differences among the mean sex-role occupational stereotyping scores of elementary school children according to gender, family structure, and socioeconomic status of parents would not be statistically significant. Information pertaining to composite null

hypothesis number two was presented in Table 2. The following were cited in Table 2: variables, sample sizes, means, standard deviations, *F* values, and *p* levels.

Table 2: A Comparison of Mean Occupational Sex-Stereotyping Scores of Elementary School Children According to Gender, Family Structure, and Socioeconomic Status of Parents Employing a Three-Way Analysis of Variance

Variable	n	M*	s	F value	p level
Gender (A)					
girls	73	8.3	6.22	0.43	.5128
boys	91	8.7	5.86		
Family Structure (D)					
intact	109	8.0	6.11	2.11	.1011
mother and stepfather	26	8.0	4.57		
mother	16	11.0	6.21		
other	13	10.7	6.76		
Socioeconomic Status of Parents (C)					
1**	54	8.7	6.65	0.06	.8058
2	110	8.4	5.70		
	Interactions				
	A x D			1.27	.2852
	A x C			1.91	.1694
	D x C			2.02	.1134
	A x C x D			1.83	.1438

*The larger the value the greater the stereotyping.

**1 = those not paying full price for school lunch, 2 = those paying full price for school lunch.

None of the 7 p values were statistically significant at the .05 level; therefore, the null hypotheses for these comparisons were retained. The results cited in Table 2 indicated no associations between any independent variable and the dependent variable.

It was hypothesized in composite null hypothesis number three that the differences among the mean sex-role occupational stereotyping scores of elementary school

children according to gender, family structure, and formal education of parents would not be statistically significant. Information pertaining to composite null hypothesis number three was presented in Table 3. The following were cited in Table 3: variables, sample sizes, means, standard deviations, F values, and p levels.

Table 3: A Comparison of Mean Occupational Sex-Stereotyping Scores of Elementary School Children According to Gender, Family Structure, and Formal Education of Parents Employing a Three-Way Analysis of Variance

Variable	n	M*	s	F value	p level
Gender (A)					
girls	73	8.3	6.22	0.21	.6472
boys	91	8.7	5.86		
Family Structure (D)					
intact	109	8.0	6.11	2.20	.0910
mother and stepfather	26	8.0	4.47		
mother	16	11.0	6.21		
other	13	10.7	6.76		
Parent Education (B)					
1**	50	9.8	5.87	1.01	.3907
2	38	7.9	6.02		
3	29	8.4	4.88		
4	47	7.7	6.70		
Interactions					
A x D				0.60	.6131
A x B				1.48	.2222
D x B				0.58	.7905
A x D x B				1.81	.0905

*The larger the value the greater the stereotyping.

**1 = high school graduation or less, 2 = education beyond high school, less than four years, 3 = some college but no degree, and 4 = college degree or more.

None of the 7 p values were statistically significant at the .05 level; therefore, the null hypotheses for these comparisons were retained. The results cited in Table 3 indicated no associations between any independent variable and the dependent variable.

It was hypothesized in composite null hypothesis number four that the differences among the mean sex-role

occupational stereotyping scores of elementary school children according to family structure, socioeconomic status of parents, and formal education of parents would not be statistically significant. Information pertaining to composite null hypothesis number four was presented in Table 4. The following were cited in Table 4: variables, sample sizes, means, standard deviations, F values, and p levels.

Table 4: A Comparison of Mean Occupational Sex-Stereotyping Scores of Elementary School Children According to Family Structure, Socioeconomic Status of Parents, and Formal Education of Parents Employing a Three-Way Analysis of Variance

Variable	n	M*	s	F value	p level
Family Structure (D)					
intact	109	8.0	6.11		
mother and stepfather	26	8.0	4.57		
mother	16	11.0	6.21	2.04	.1114
other	13	10.7	6.76		
Socioeconomic Status of Parents (C)					
1**	54	8.6	6.65		
2	110	8.5	5.70	0.18	.6694
Parent Education (B)					
1***	50	9.8	5.87		
2	38	7.9	6.02		
3	29	8.4	4.88	1.81	.1478
4	47	7.7	6.70		
	Interactions				
	D x C			2.52	.0606
	D x B			0.79	.6165
	C x B			0.41	.7442
	D x C x B			0.26	.9559

*The larger the value the greater the stereotyping.
**1 = Those not paying full price for school lunch, 2 = Those paying full price for school lunch.
***1 = high school graduation or less, 2 = education beyond high school, less than four years, 3 = some college but no degree, and 4 = college degree or more.

None of the 7 p values were statistically significant at the .05 level; therefore, the null hypotheses for these comparisons were retained. The results cited in Table 4 indicated no associations between any independent variables

and the dependent variable.

It was hypothesized in composite null hypothesis number five that the differences among the mean sex-role occupational stereotyping scores of elementary school children according to gender, family structure, and grade level would not be statistically significant. Information pertaining to composite null hypothesis number five was presented in Table 5. The following were cited in Table 5: variables, sample sizes, means, standard deviations, F values, and p levels.

Table 5: A Comparison of Mean Occupational Sex-Stereotyping Scores of Elementary School Children According to Gender, Family Structure, and Grade Level Employing a Three-Way Analysis of Variance

Variable	n	M*	s	F value	p level
Gender (A)					
girls	73	8.3	6.22	0.03	.8573
boys	91	8.7	5.86		
Family Structure (D)					
intact	109	8.0	6.11	2.41	.0696
mother and stepfather	26	8.0	4.57		
mother	16	11.0	6.21		
other	13	10.7	6.76		
Grade Level (E)					
2nd	53	9.8[a]	5.42	3.20	.0439
4th	62	8.5	6.14		
6th	49	7.1[b]	6.23		
Interactions					
A x D				0.96	.4153
A x E				0.17	.8469
D x E				0.68	.6647
A x D x E				1.24	.2966

*The larger the value the greater the stereotyping

[ab]Difference statistically significant at the .05 level according to Bonferroni (Dunn) t test for means.

One of the 7 p values was statistically significant at the .05 level; therefore, the null hypotheses for this comparison was rejected. The significant comparison was for the main effect grade level. The results cited in Table 5 indicated that second graders had statistically larger scores for sex-stereotyping than sixth graders.

It was hypothesized in composite null hypothesis number

six that the differences among the mean sex-role occupational stereotyping scores of elementary school children according to socioeconomic status of parents, formal education of parents, and grade level would not be statistically significant. Information pertaining to composite null hypothesis number six was presented in Table 6. The following were cited in Table 6: variables, sample sizes, means, standard deviations, F values, and p levels.

Table 6: A Comparison of Mean Occupational Sex-Stereotyping Scores of Elementary School Children According to Socioeconomic Status of Parents, Formal Education of Parents, and Grade Level Employing a Three-Way Analysis of Variance

Variable	n	M*	s	F value	p level
Socioeconomic Status of Parents (C)					
1**	54	8.6	6.65		
2	110	8.5	5.70	0.14	.7137
Parent Education(B)					
1***	50	9.8	5.87		
2	38	7.9	6.02		
3	29	8.4	4.88	1.50	.2177
4	47	7.7	6.70		
Grade Level (E)					
2nd	53	9.8	5.42		
4th	62	8.5	6.14		
6th	49	7.1	6.23	1.19	.1524
Interactions					
C x B				0.64	.5932
C x E				0.49	.6142
B x E				0.80	.5706
C x B x E				1.23	.2973

*The larger the value the greater the stereotyping.

**1 = Those not paying full price for school lunch and 2 = those paying full price for school lunch.

***1 = high school graduation or less, 2 = education beyond high school, less than four years, 3 = some college but no degree, and 4 = college degree or more.

None of the 7 p values were statistically significant at the .05 level; therefore, the null hypotheses for these comparisons were retained. The results cited in Table 6 indicated no associations between any independent variable and the dependent variable.

Discussion

Summary

The purpose of the researcher was to investigate occupational sex-role stereotyping in elementary school children. The five independent variables were gender, family structure, socioeconomic status of parents, formal education of parents, and grade level. The dependent variable was Occupational Sex-Stereotyping scores. The sample consisted of 164 children from grades 2, 4, and 6. Six null hypotheses were tested at the .05 level using three-way analysis of variance.

A total of 21 comparisons plus 21 recurring were made. Of the 21 comparisons made, 5 were main effects and 16 were interactions. One of the 5 main effects was statistically significant at the .05 level. The statistically significant main effect was for grade level. The results from the main effect indicated that second graders had significantly higher sex-stereotyping scores than sixth graders. One of the 16 interactions was statistically significant at the .05 level. The statistically significant interaction was between gender and socioeconomic status of parents.

Related Literature and Present Study

The results of the present study supported the findings reported by Awender and Wearne (1990) that as the age of children increased the sex-occupational stereotypes decreased. Awender and Wearne (1990) studied students ages

9-14 and the present study used a sample of students ages 7-12. Information cited in the present study did not support the findings of Hageman and Gladding (1983). They reported that as the age increased so did the sex-occupational stereotyping. The study conducted by Hageman and Gladding (1983) compared occupational preferences of male students in grades 3 and 6. The present study compared all students in grades 2, 4, and 6.

Results of the present study gave partial support to the findings reported by Awender and Wearne (1990) that children from the lower socioeconomic group sex-stereotyped more than children from the higher socioeconomic group. The present study indicated that this was true for female students; however, reversed for male students.

Generalizations

The results of the present study appeared to support the following generalizations:

(1) second graders have more sex-stereotyping than sixth graders,

(2) family structure is not associated with sex-role occupational stereotyping,

(3) level of parent education is not associated with sex-role occupational stereotyping,

(4) girls from low socioeconomic status parents had numerically greater sex-stereotyping than girls from high socioeconomic status parents, and

(5) boys from low socioeconomic status parents had numerically less sex-stereotyping than those from high socioeconomic status parents.

Recommendations

The results of the present study appeared to support the following recommendations:

(1) the study should be replicated with a large random sample at all grade levels,

(2) the study should be replicated in schools from other geographical areas, and

(3) the study should be replicated to match parent scores with their child's score.

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Appendix A

A Copy of the Instrument Used:

Occupational Sex-Stereotyping

OCCUPATIONAL SEX-STEREOTYPING*

Name_____ Girl Boy

Grade_____

I live with..... both biological parents

mother and stepfather

father and stepmother

mother

father

other

Who has the skill to do these jobs? Circle "FEMALE ONLY" if you think only girls and women have the skill to do the job. Cirlce "MALE ONLY" if you think boys and men have the skill to do the job. Circle the word "BOTH" if you think both females and males have the skill to do the job.

1.	Zookeeper	FEMALE ONLY	MALE ONLY	BOTH
2.	Fashion Designer	FEMALE ONLY	MALE ONLY	BOTH
3.	Astronaut	FEMALE ONLY	MALE ONLY	BOTH
4.	Chemical Engineer	FEMALE ONLY	MALE ONLY	BOTH
5.	Singer	FEMALE ONLY	MALE ONLY	BOTH
6.	Basketball Player	FEMALE ONLY	MALE ONLY	BOTH
7.	News Broadcaster	FEMALE ONLY	MALE ONLY	BOTH
8.	Baker	FEMALE ONLY	MALE ONLY	BOTH
9.	Business Secretary	FEMALE ONLY	MALE ONLY	BOTH
10.	Waitperson	FEMALE ONLY	MALE ONLY	BOTH
11.	Computer Worker	FEMALE ONLY	MALE ONLY	BOTH
12.	School Teacher	FEMALE ONLY	MALE ONLY	BOTH
13.	Truck Driver	FEMALE ONLY	MALE ONLY	BOTH
14.	Tennis Player	FEMALE ONLY	MALE ONLY	BOTH
15.	Firefighter	FEMALE ONLY	MALE ONLY	BOTH
16.	Model	FEMALE ONLY	MALE ONLY	BOTH
17.	Police Officer	FEMALE ONLY	MALE ONLY	BOTH
18.	Veterinarian	FEMALE ONLY	MALE ONLY	BOTH
19.	Doctor	FEMALE ONLY	MALE ONLY	BOTH
20.	Mechanic	FEMALE ONLY	MALE ONLY	BOTH
21.	Farmer	FEMALE ONLY	MALE ONLY	BOTH
22.	Scientist	FEMALE ONLY	MALE ONLY	BOTH
23.	Artist	FEMALE ONLY	MALE ONLY	BOTH
24.	Store Clerk	FEMALE ONLY	MALE ONLY	BOTH
25.	Mail Carrier	FEMALE ONLY	MALE ONLY	BOTH
26.	Airplane Pilot	FEMALE ONLY	MALE ONLY	BOTH
27.	Lawyer	FEMALE ONLY	MALE ONLY	BOTH
28.	Florist	FEMALE ONLY	MALE ONLY	BOTH
29.	Nurse	FEMALE ONLY	MALE ONLY	BOTH
30.	Heavy Equipment	FEMALE ONLY	MALE ONLY	BOTH

*Eichman, 1987, p.52

Appendix B

Letters of Permission

March 4, 1992

Lavonda Eichman
Elementary School Counselor
USD #443
Dodge City, KS 67801

Miss Eichman,

I am writing in reference to your Master's Degree Thesis, "Implementing Change in Career Awareness Among Primary Students". I am in the process of researching occupational sex-role views in elementary students. I am interested in using the Occupational Sex-Stereotyping instrument included in your thesis. I would like to ask for your permission to incorporate this instrument in my thesis research.

I would appreciate a written response regarding this matter. Thank you for your time.

Sincerely,

Sheila Billings
Elementary School Counselor

March 17, 1992

Sheila Billings
206 N. York Ayenue
Apartment 11
Oberlin, KS 67749

Sheila,

I am writing in reference to your letter dated March 4, 1992, concerning the Occupational Sex-Stereotyping instrument I used in my thesis. You have my permission to use the Occupational Sex-Stereotyping instrument for your thesis research.

Please feel free to contact me if you need any other assistance.

Sincerely,

Lavonda Eichman

Lavonda Eichman